

APPENDIX A

1 (Currently Amended). A method for improving performance of a signal transmitted via a conductive circuit trace of a circuit board, the method comprising the step of:

providing a layer of the circuit board having the conductive circuit trace on a surface thereof; and

reducing a surface roughness of at least one surface of the conductive circuit trace on the surface of the circuit board layer so as to improve performance of a signal transmitted via the conductive circuit trace.

2 (Currently Amended). The method as in Claim 1, wherein the step of reducing the surface roughness includes one of a group consisting of: electropolishing the at least one surface; chemical polishing the at least one surface; electrochemical polishing the at least one surface; chemical-mechanical polishing the at least one surface; mechanical polishing the at least one surface; electroplating the at least one surface; and vacuum depositing conductive material on the at least one surface.

3 (Original). The method as in Claim 1, wherein the surface roughness of the at least one surface is reduced to no more than

20 microinches root-mean-squared (RMS).

4 (Original). The method as in Claim 1, wherein the surface roughness of the at least one surface is reduced to no more than 10 microinches root-mean-squared (RMS).

5 (Original). The method as in Claim 1, wherein the surface roughness of the at least one surface is reduced to no more than 5 microinches root-mean-squared (RMS).

6 (Original). The method as in Claim 1, wherein the at least one surface of the conductive circuit trace includes one of a group consisting of: a surface parallel and distal to a surface of the circuit board; a surface parallel and proximal to the surface of the circuit board; and a surface perpendicular to the surface of the circuit board.

7 (Original). A circuit board for transmitting at least one signal, the circuit board comprising:

at least one conductive circuit trace for carrying at least one signal, the at least one conductive circuit trace having at least one polished surface.

8 (Original). The circuit board as in Claim 7, wherein the at least one polished surface is polished using one a group consisting of: electropolishing; chemical polishing; electroplating; and vacuum deposition.

9 (Original). The circuit board as in Claim 7, wherein a surface roughness of the at least one polished surface is no more than 20 microinches root-mean-squared (RMS).

10 (Original). The circuit board as in Claim 7, wherein a surface roughness of the at least one polished surface is no more than 10 microinches root-mean-squared (RMS).

11 (Original). The circuit board as in Claim 7, wherein a surface roughness of the at least one polished surface is no more than 5 microinches root-mean-squared (RMS).

12 (Original). The circuit board as in Claim 7, wherein the at least one polished surface of the conductive circuit trace includes one of a group consisting of: a surface parallel and distal to a surface of the circuit board; a surface parallel and proximal to the surface of the circuit board; and a surface perpendicular to the surface of the circuit board.

13 (Original). A conductive circuit trace for carrying a signal, the conductive circuit trace comprising:

conductive material having a plurality of surfaces substantially parallel with a direction of propagation of the signal;

wherein the plurality of surfaces includes at least one polished surface having a reduced surface roughness.

14 (Original). The conductive circuit trace as in Claim 13, wherein the at least one polished surface is polished using one of a group consisting of: electropolishing; chemical polishing; electroplating; and vacuum deposition.

15 (Original). The conductive circuit trace as in Claim 13, wherein the reduced surface roughness of the at least one polished surface is no more than 20 microinches root-mean-squared (RMS).

16 (Original). The conductive circuit trace as in Claim 13, wherein the reduced surface roughness of the at least one polished surface is no more than 10 microinches root-mean-squared (RMS).

17 (Original). The conductive circuit trace as in Claim 13, wherein the reduced surface roughness of the at least one polished surface is no more than 5 microinches root-mean-squared (RMS)..

18 (Original). The conductive circuit trace as in Claim 13, wherein the at least one polished surface includes one of a group consisting of: a surface parallel and distal to a surface of the circuit board; a surface parallel and proximal to the surface of the circuit board; and a surface perpendicular to the surface of the circuit board.

19 (New). The method as in Claim 1, wherein the conductive circuit trace is formed on the surface of the circuit board layer.

20 (New). The method as in Claim 1, wherein the conductive circuit trace is affixed to the surface of the circuit board layer.